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Abstract

Device for controlling the drawing process in a transfer press

A device for controlling the drawing process in a transfer press, with two tool parts which act in opposition to one another and between which the workpiece to be deformed is held, is described. One tool part can be moved between two reversal points by a mechanical crank mechanism driven at a constant rotational speed. The second tool part is connected to the piston of a hydraulic differential cylinder via a piston rod. The movement of the piston is controlled by the supply of pressure medium into a first chamber and by the discharge of pressure medium out of the second chamber of the differential cylinder. During a first time segment within a range delimited by the first and the second reversal point, the rod-side face of the piston is acted upon by a pressure which is sufficiently high to accelerate the second tool part in such a way that, when the two tool parts impinge one onto the other, both tool parts move virtually at the same speed. A controllable throttle is arranged between a bottom-side chamber and a tank. In order to save energy when a transfer press of this type is in operation, in a second time segment which follows the first time segment and extends until the second reversal point is reached, the rod-side face of the piston is acted upon by a second pressure which is lower than the pressure during the first time segment.